SOLAR PV CABLE ASSEMBLIES

FOR 1500 VDC SYSTEMS

INCREASE EFFICIENCY AND CUT DOWN ON INSTALLATION TIME WITH PRE-ASSEMBLED, PLUG AND PLAY HIGH-QUALITY PV HARNESSES THAT ARE SAFE AND RELIABLE

APPLICATIONS

- Utility-scale Solar Projects

RELEVANT STANDARDS AND TEST REPORTS

- Tested and certified to UL9703
- UL746C and UL94 certified

KEY FEATURES

- In line over-molded fuses up to 80A
- Field-proven design to last the industry lifespan requirement
- Custom-made harnesses, whips and jumpers
- Designed for 1500 VDC system with 2000 V rated cable
- Available in different wire colors and cable size options
- Available options for multiple panel technologies (Thin-film or Bi-facial)
- TE design team provides support to ensure compatibility with project specific requirements (connector compatibility, code compliance, etc.)

TE Connectivity (TE) Solar PV Cable Assemblies are designed for PV solar applications up to 1500 V with multiple cable sizes (#14 - #6 AWG). Our solution offers a complete range of harnesses with different configurations, including in-line over-molded fuses up to 80A, branching, whips, and string jumpers.

To ensure a reliable and long-lasting PV solar cable assemblies, each cable assembly is tested before shipment and must pass a series of tests, including the submersion leakage (hi-pot) test, continuity test, resistance check, weight check, and visual inspection. An X-ray check is performed on every batch to ensure molded joints are centered and have the appropriate wall thickness around the conductors.

For traceability, each cable assembly is marked with a distinct serial number or barcode.

FUSED HARNESSES

String Configuration	Customized to Project Needs
Cable Size	14 AWG to 6 AWG Flexible cable options (+49STR for #8 AWG and larger) available upon request
PV Connectors	PV4S, PV5, and most PV connector brands
Cable Color	Black, Red, Black w/Red Stripe, White
Max Fuse Size	Up to 80A
Cable Rating	Designed for 1500 VDC System with 2000 V Rated Cable

GPackS

Add-ons

- **Labeling**
  - Each individual jumper/ harness can be labeled according to site location (circuit, block, etc).
- **GPackS**
  - Prepackaged harnesses by block upon request.
  - Collapsible and re-useable containers.
  - Rough terrain capable carts with foam filled tires, towable by side by side.
  - Little-to-no waste on site.

CU/AL TRANSITION HARNESSES

KEY FEATURES

- Ideal for cost savings on end-of-row designs
- Extension connects harnesses to high-power connections
- Customized design to accommodate site layouts reducing the overall project budget
- Prevent increased oxidation from dissimilar metal surface contacts
- Minimize copper usage by utilizing cost-efficient aluminum materials
- Protection against dust and water (IP68)

COST-SAVING DESIGN FOR SEAMLESSLY CONNECTING COPPER STRING HARNESSES TO ALUMINUM PV CABLE

Copper-to-aluminum (Cu-Al) transitions could be crucial components for cost savings in utility-scale solar Electrical Balance of System (EBOS) applications, offering an efficient combination of performance, cost savings, and reliability. Aluminum is commonly used for most system wiring due to its lightweight and cost-effective nature, while copper is employed in critical areas requiring higher electrical conductivity and durability. This dual-material approach optimizes the balance between cost, weight, and performance across the system.

AVAILABLE OPTIONS

CU/AL Transition Cable	Copper AWG	Aluminum AWG
Solar Cable CU-AL Junction Cable	#12	#6
	#10	#6
	#8	#6
	#10	#4
	#8	#4
	#6	#4
	#10	#2
	#8	#2
	#6	#2

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